MYRMECIA

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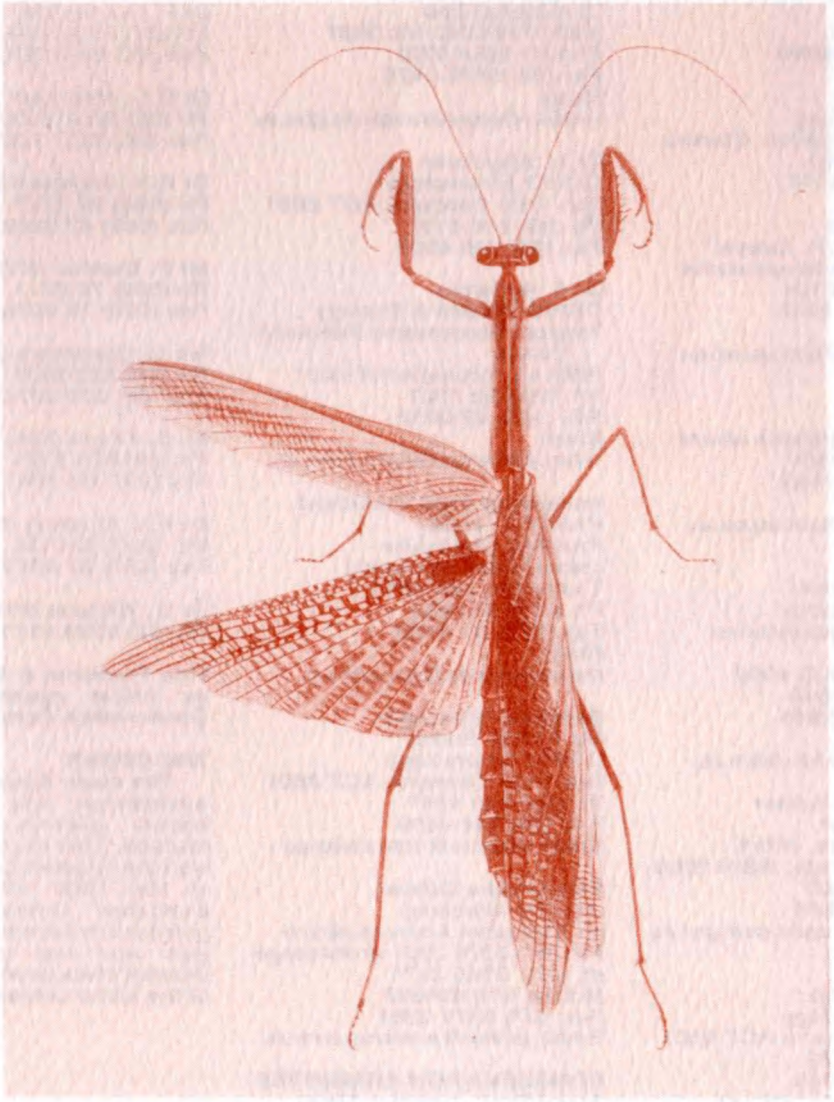

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THE COVER

The cover depicts *Tenodera australasiae*, one of the best known common Australian mantids. The illustration, which won the Student Colour section of the 1996 AES Scientific Illustration Competition, was prepared by **Sharyn Wragg** who also won first prize in the Student Black and White section of the same competition.

MYRMECIA

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NOTICE

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COPY DEADLINE FOR NEXT ISSUE

Material for publication in the August 1997 issue of *Myrmecia* should be in the hands of the Editor at the address below by **Friday 25 July 1997**. Submission to fletchm@agric.nsw.gov.au is preferred but submission on IBM-compatible floppy disk in a major word processing format, or by fax, letter or carrier pigeon to the address below is acceptable.

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EXECUTIVE REPORT

MEETINGS

The Core Executive met on 3 March, 16 April, and 23 April 1997.

NEW MEMBERS

Elected 16 April 1997

Paul GRASSICK, Loganholme, Qld (full member)
George HANGAY, Narrabeen, NSW (rtd member)
Eklass JARJEES, St Lucia, Qld (student)
Kui HUANG, St Lucia, Qld (student)
David LOGAN, Bundaberg, Qld (student)
Lubomir BISEVAC, Perth, WA (student)

Change of Address, Status or Title

Tony CLARKE is now at the Department of

Entomology, University of Queensland.

Resignations
(received with regret)
John TRUEMAN, Canberra

FROM MINUTES OF THE CORE EXECUTIVE

Much of the business continues to revolve around changes to the journal, including discussions with possible publishers (Blackwells & CSIRO Publishing). The Executive hopes to be able to present the bids to the AGM in September.

The Canberra tourist bureau called the Secretary to say how anxious they are to have an AGM in Canberra. The Secretary suggested that 1999 would be a wonderful year to have the joint AES-NZES meeting in Canberra and pointed out that **Penny Gullan** had wonderful organisational talents.

We received a report on *Chrysoperla congrua* from **Shaun Winterton** from his AES Research Grant supported study. Shaun has submitted the paper from which the report is abstracted for publication.

The Executive responded to a letter pointing out a lack of clarity in the role of the Technical Editors. In the future, the four Technical Editors should be considered full members of the Editorial Board, i.e. as well as their duties as technical editors, they may act as referees.

New Council Members
and Executive Appointments

Dr Jane ELEK (Forestry Tasmania, GPO Box 207B, Hobart 7001, 03-62-338-220, jae@forestry.tas.gov.au) is the new Regional Councillor from Tasmania.

Dr Richard RUSSELL (Westmead Hospital) is the new delegate to the Board of Trustees of the International Federation of Tropical Medicine.

David WALTER
Honorary Secretary

REGIONAL NEWS

NEW SOUTH WALES

Centre for Entomological Research and Insecticide Technology (CERIT)
University of New South Wales

In February CERIT welcomed a new addition to its current staff, with the arrival of CERIT Visiting Fellow, **Mads Mourier** from Denmark. Mads will be with CERIT till the end of the year and will be working on a number of research tasks during his stay with us.

The 1997 CERIT guest lecture was presented by Professor **Marc Klowden**, Head of Department of Plant, Soil & Entomological Sciences, University of Idaho, on Monday 28 April, as part of the UNSW Biological Sciences seminar program. Marc's topic of "Regulation of Mosquito Host Seeking Behaviour" was well received by a sizeable audience including many industry visitors.

Preparation is well underway for an Industry Briefing Symposium CERIT staff are organising for Monday 29 September. The Topic "Insects and Human Health in Australia" should be of interest to industry, health professionals and researchers. Specialists in a variety of fields are being invited to speak on the day. Letters of interest will be sent out soon. To ensure your copy please contact Ms J Short, CERIT, Biological Science, UNSW, Sydney 2052 or email CERIT@unsw.edu.au or Fax (02)9385 0346.

Recent visitors have included: **Mario Abela**, Reckitt & Colman Australasia, **Graeme Smith**, Bayer Australia & **Muhammed Zaini**, Bayer Malaysia, **Phil Hadlington**, **Tom Spurling, Greg Simpson** & **Jack Steele**, CSIRO, **Koogen Kander**, Australian Specialty Chemicals, **Vince O'Brien**, Dein & O'Brien, **Dennis Fong**, Colgate-Palmolive.

Julie-ann SHORT
CERIT, UNSW

Department of Medical Entomology
University of Sydney at Westmead Hospital

In late November, **Richard Russell, Stephen Doggett, Cameron Webb, John Clancy, John Haniotis** and **Karen Willems** headed north for the 7th Arbovirus Research in Australia/2nd Mosquito Control Association of Australia Conference at the Gold Coast. All up we had 12 presentations including papers on mosquito ecology, mosquito distribution, dog heartworm, arbovirus monitoring, vector competence, microsporidia and two papers on techniques.

Prior to the conference we had several overseas visitors including **Bill Reisen** from the Centre for Vector-Borne Disease Research, University of California and **Stanton Cope** from the Department of Entomology, US Navy Environmental and

Preventative Medicine Unit. Stan was here in Australia mainly for Operation Tandem Thrust, a joint military exercise between Australian and US military forces. While in Shoalwater Bay, where the exercise was undertaken, Stan collected many thousands of mosquitoes which were sent to our Department for virus isolation. These are slowly being ploughed through by **John Clancy**.

In the same month, Entomology had a chance to publicly display their wares in the biannual Westmead Hospital Open Day, with Richard, **Merilyn Geary,** Stephen, Karen and Cameron manning the stall. The staff especially enjoyed being asked if our two foot model of an *Anopheles* mosquito was real (with an astounding reply of "you betcha!") and whether or not mosquito carries AIDS (only if we get more research money!).

Early in 1997 our Department was fortunate to have another overseas visitor, **Marc Klowden**. Marc is a renowned mosquito physiologist from the Division of Entomology, University of Idaho, and is currently on sabbatical for six months. While here he has taught the staff how to place a girdle on a female mosquito and how to give mossies enemas, essential skills for all culicid workers.

Richard Russell travelled to Broome, WA, in March to help out with a training course on mosquito control with **Tony Wright** of the WA Health Department and **Peter Whelan** of the NT Health Department. He has also been involved in teaching at a workshop on "Wastewater Wetlands" at the University of Western Sydney, Hawkesbury. However, the major item of interest from Richard's desk is his publication of "A Colour Photo Atlas of Mosquitoes of Southeastern Australia", which has received widespread interest and is selling extensively throughout Australia.

The Arbovirus monitoring program has come and gone for this season keeping the two Johns and Stephen busy. Overall the season was very quiet in NSW with little arbovirus activity and fairly low mosquito numbers.

After attending a Wetlands workshop held by the Hawkesbury-Nepean Catchment Management Trust, Merilyn has been busy preparing Medical Entomology fact sheets on all things that bite and irritate.

Other visitors to the lab included several University of Sydney Microbiology students (Branco, Lilliana and David) here for work experience and **Tim McManus** from the Tasmanian Department of Primary Industries and Fisheries, who came to discuss future directions in arbovirology in Tasmania.

Stephen DOGGETT
Regional Councillor

Bathurst Agricultural Research Station

Congratulations to **Adrian Nicholas** on graduating with a MSc (with Honours) from the University of Western Sydney in May. His project was on secondary pests and beneficials associated with codling moth IPM.

Orange Agricultural Institute

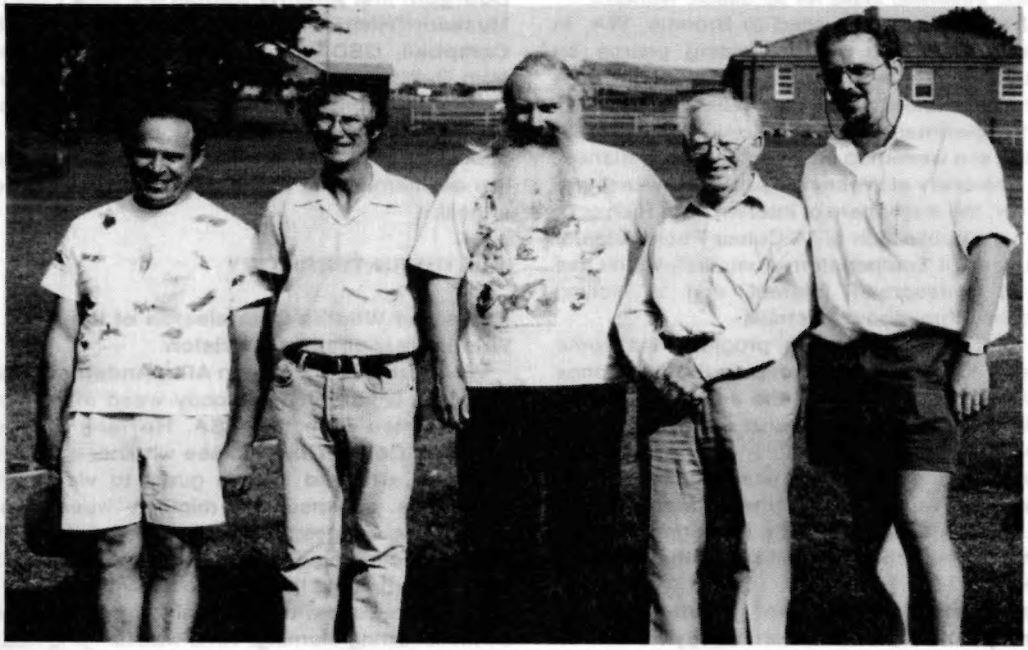
The new Scientific Collections Building is still nearing completion with the air conditioning now installed just in time for winter. Visitors checking out the new facilities have included **Max Day** from ANIC, **Penny Gullan** from ANU and **Darryl Webb** from the Waite. This was in addition to a wave of Auchenorrhyncha workers following a most successful 9th International Auchenorrhyncha Congress in Sydney in February (see photos, next page). These visitors included **Dima Shcherbakov** and **Alexandre Emeljanov** from Russia, **Thierry Bourgoin** and **Adeline Soulier-Perkins** from the Museum d'Histoire Naturelle, Paris, **Bruce "Wally" Campbell**, USDA, and **Jody Steffen-Campbell** from California and **Mick Webb** from the Natural History Museum in London. The local press took an interest and several photos but ended up publishing one of **Jasbir Mann** because he looked like an international visitor, even though he is now a local.

NORTHERN TERRITORY

Parks and Wildlife Commission of the NT Wildlife management Division

World famous ant person **Alan Andersen** had a visit from world famous woody weed man **Steve Radosovitch** from the USA. He rang up local nonentity **Colin Wilson** to see whether a field trip could be arranged for his guest to view some impressive expanses of mimosa weed. Colin agreed and suggested the local McBurger as the sort of meeting place that no Yank could possibly miss. Alan thought this a top idea and promised to get back to Colin with a mutually acceptable time on the following morning. Time was hanging heavy the next day as Colin awaited the expected call. Eventually he gave in and rang Alan to find out what was causing the delay. Alan's response was

Delegates to the 9th International Auchenorrhyncha Congress following lunch at the Hydro Majestic Hotel, Medlow Bath, Blue Mountains



Organising committee for the 9th International Auchenorrhyncha Congress in Sydney: L to R: Peter Gillespie, Max Moulds, Murray Fletcher, Max Day, Mark Stevens

"Steve left to meet you half an hour ago....um....it's a good thing you called..." Colin raced down the road to find a bemused American ecologist wandering aimlessly around the car park of the aforementioned hamburger joint. Ants are really organised. You'd have thought some of it would have rubbed off.

Northern Territory University

After coming back from the International Cashew and Coconut Conference (17-21 February at Dar Es Salaam, Tanzania) where he had a good time presenting his work and exchanging results with other cashew entomologists on the use of *Oecophylla* weaver ants to control cashew insect pests, **Renkang Peng** is now concentrating on several field experiments. Apart from the normal green ant colony observations. these include the isolation of ant colonies, the building of airways between cashew and native trees, the introduction of ant colonies into un-colonised trees and the determination of the distribution of dealate female nests near well established colonies. He also rears green ant colonies in his back yard and has to look after (or out for!) these from time to time.

After his African safari, a trip back to China will be like a stroll in the back garden for Peng, although a stroll through Peng's back garden is not likely to be leisurely with its disproportionately high concentration of green ants. Anyway, Peng plans to pay a short visit to South China shortly to investigate how they use *Oecophylla* to control citrus pests.

CSIRO Division of Wildlife & Ecology
Invertebrate Lab

Alan Andersen and new student, **Marianne Fraval** (ants - what else?) with **Tracey Churchill** and **Lyn Lowe** (spiders) have been busy identifying material from a survey carried out along grazing gradients in the Barkly Tablelands region in Mitchell grasslands. Alan has also been guiding **Melinda Hillery**, a visitor from Alice Springs labs, through ant IDs, as part of a study with **Craig James** of fenceline comparisons (grazed and not) from SW Qld and NW NSW. **Ben Hoffman** is about to spring from his bench to the field to enthusiastically start his PhD sampling of ants from paddocks with different grazing histories at Kidman Springs.

Ros Blanche is busy analysing beetle data from the Kapalga Fire Experiment in Kakadu, and **Andrea Salvorani** has been making progress with the ants before getting even more excited about ants from the NATT (Northern Australian Tropical Transect) as part of his PhD project. **Tony Hertog** has finished processing beetles from the 1996 survey of NATT sites and now enjoying a long holiday (although he confesses that making bird cages is some form of relaxation!)

Lyn Lowe has almost finished her End of Wet grasshopper sampling along the NATT sites, and spending her evenings testing her new skills in astronomy (is there a great hopper out there, somewhere??). Pitfall trapping along the NATT is now underway by a mixed team of the above, plus **Gus Wanganeen**, ex-vertebrate labs, who has seized the opportunity for a strategic career move to join the spider lab. Tracey meanwhile has been writing summary reports from the local, NATT and Barkly surveys and keeping her nails clean for her imminent wedding interstate (the honeymoon had to include croc free surf). **Jenni Webber** has completed sorting spiders from local seasonal samples and is now jumping with joy as she tackles salticid taxonomy!

CSIRO Div. of Entomology

Entomology staff working on biological control of weeds at TERC have been furthering our understanding of *Mimosa* biology and attempting to quantify the impact of selected biocontrol agents on the weed. **Naomi Rea** has been looking at the plant's response to environmental influences such as availability of light and water and how this influences plant architecture and phenology. **Martin Steinbauer** has been investigating the impact of the sesiid moth, *Carmenta mimosa*, on plants with different phenotypes as well as the likely result of floret destruction by the weevil *Coelocephalapion pigrae* on seed production. A large scale field experiment of Martin's to investigate the role of increased plant quality on populations and impacts of biocontrol agents met a watery end following the record rains dumped by cyclone Rachel. **Tim Schatz, Susan Gall** and **Megan Hoskins** have been providing great assistance in keeping Naomi and Martin in line with subtle inferences as to the close proximity of their Smith and Wesson .357!!!

Territory Health Services
Medical Entomology Branch

Mosquito numbers in the Darwin area have been

relatively low in the February - April period following the very good aerial control of salt marsh mosquitoes in the coastal swamps. This has led to very low numbers of Ross River virus (RRV) cases in the Darwin urban area, similar to last year's record low number. The numbers of the "common banded mosquito" and *Anopheles bancroftii* have not begun their seasonal post wet season rise as yet, indicating that the record rainfall last wet season which filled the coastal swamps, has delayed the seasonal rise by about 1 month.

In the Barkly and Alice Springs regions there were high numbers of a floodwater mosquito and the "common banded mosquito" in February to March, which resulted in higher than usual numbers of RRV cases in these areas. The numbers of the "common banded mosquito" are now decreasing rapidly in these areas, so tourists to central Australia now have a significantly reduced risk of contracting RRV.

The Branch held its annual Mosquito Control Advisory Committee meeting in early March, and had a presentation by consultants on a project to rectify a large area of bomb cratered salt marsh near Darwin. The Department of Defence has been very co-operative in the process and detailed planning is proceeding on the project.

There has been a rise in the numbers of intercepted foreign illegal fishing vessels brought in to Darwin Harbour, and the Australian Quarantine Inspection Service has discovered numerous water drums infested with relatively large numbers of mosquito larvae. The MEB has identified *Aedes aegypti* and *Aedes albopictus* in the intercepted mosquitoes, illustrating the continuing threat of importation of these dengue vectors to the NT. There have also been numerous cases of malaria from crews of these boats. A joint MEB Quarantine investigation was conducted to determine whether local malaria vector species were the source of mosquito complaints reported by several crews. No mosquitoes were trapped or detected but one crew subsequently provided a sample of bed bugs, illustrating the communication problems with these fishermen.

Dr Brahim, the Director of the Indonesian Institute of Health visited the Branch in March to inspect the Branch mosquito monitoring and control operations and discuss malaria and dengue surveillance.

Peter Whelan has just completed a report on investigations of biting insects at a potential site for a gas plant in Darwin Harbour. It was carried out on foot in an inaccessible island of mangroves and vine thicket jungle after being landed in by helicopter during a cyclone alert period. Despite the rain, the trap and ground survey yielded a good insight into the biting insect problems, including a site of high *Forcipomyia* activity. He recommends surveys of the area as a weight reducing strategy.

Peter Whelan also assisted **Tony Wright** together with the WA arbovirus team, and **Richard Russell** with the WA Mosquito Control Course at Broome in March.

Gwenda Hayes is away on study leave, but cheerfully resumed work for 1 week to progress on her project of setting up a database for all the Branch projects. While she is away **Ross Nowland, Barbara Love** and **Jane Carter** are alternatively sharing her duties in a great team approach. **Brian Montgomery** has been continuing on development proposals and planning issues, between identifying exotic mosquito larvae for Quarantine and biting midges for the various Branch projects, and preparing several baseline mosquito monitoring reports for mining companies.

The Branch has completed its detailed Annual Report for 1995/96 and anyone requiring a copy can contact **Peter Whelan** on 89228333.

NT Museum

Graham Brown spent two weeks collecting in the East and West MacDonnell Ranges in March after good summer rains. Collecting was exceptional, but continuing rains prevented access and therefore collecting along the Tanami Track. Graham also collected on numerous short trips near Darwin to gather specimens for the Museum's new Natural Sciences Gallery.

Environmental Research Institute of the Supervising Scientist

It's coming up to that time of year when final reports are due so there is a lot of activity centring around synthesising and writing up data. **Chris Humphrey** is working in collaboration with other limnologists across the country on the biological assessment component of the next ANZECC Water Quality Guidelines. **Lisa Thurtell** and **Ruth O'Connor** are identifying the last macroinvertebrates for their projects on QA/QC of sorting and identification for the national Monitoring River Health Initiative while also trying to come to

grips with the ever-changing world of chironomid taxonomy. In amongst all this activity the Wet Season decided to come to an abrupt end, so the gang swapped computers for sampling gear and headed for Magela Ck to continue their ongoing monitoring of this system - it's a hard life.

Department of Primary Industry and Fisheries Weeds Biocontrol Branch

The record wet season seems to be over, thank God. In the last 3 months field trips were very difficult and dangerous for the biocontrol team. Many release sites were covered in up to 2m of water. **Bert Lukitch, Lynne Burrel, Bruce Hitchins** and **Merrilyn Paskins** together with **Tim Schotz, Susanne Gall** and **Martin Steinbauer** from CSIRO, attended a shooting course to be prepared for releases in croc infested areas. Merrilyn, who could easily compete with "Calamity Jane", will never make it onto the "Front Page" of the NT News by shooting a crocodile, because her first shot was her last shot. No, she did not shoot herself, but she first has to be able to harm a fly before she can shoot a crocodile.

Tim Heard visited Darwin and dropped in at the Biocontrol Section. **Bertie Hennecke** attended a AQIS workshop on the importation of plant pathogens in Canberra and **Grant Flanagan** escaped his desk for a few days to attend a workshop on Alligator Weed. **Andrea Wilson** was joined by **Gio Fichera** from CSIRO Division of Entomology, for a release of *Eutinobothrus pilosellus*, a sida feeding beetle, in Katherine. Gio really enjoyed himself driving on the "open speed" highways in the Northern Territory, yeeha! but we are unsure whether he was able to get the car to keep up with the speeds attained by his mouth.

Northern Australian Quarantine Strategy Branch

Robin Eichner and **Glenn Bellis** recently received a fridge for use in their new demountable. Now all they need is the new demountable to keep the fridge in. In the meantime they are still squatting in any vacant office space they can find. **Tony Postle** visited Darwin between flights from Brisbane to Broome and was pounced on to sort out the local anthocorid collection.

Entomology Branch

Haidee Brown has been busy acting as the middle man in distributing parasites of citrus leaf miner to interested parties in Katherine and Kununurra. If you thought citrus leafminer moths were small, you should see their parasites!

Graham Young, tired of chasing his own tail, has been chasing foxtails lately. A report of something eating foxtail palm flowers had Graham collecting moth larvae and adult *Xylotrupes rhinoceros* beetles.

Visits by **Neil Forrester** from the Australian Cotton Research Institute, **Hide Ichihasi** from Japanese Quarantine and **Ismail Ngazizah** from Malaysian Quarantine have kept the branch's diplomats busy over the past few months.

Glenn BELLIS
Regional Councillor

S.E. QUEENSLAND

Queensland Institute of Medical Research

Marc Klowden, University of Idaho, US, currently on sabbatical with **Richard Russell**'s group at Westmead Hospital in Sydney, visited in early April and presented his work to the Malaria and Arbovirus unit at the QIMR. Marc's presentations on "Regulation of host seeking in mosquitoes" was enjoyed by all.

Ann-Marie Boyd has commenced her PhD at the QIMR. Ann-Marie will investigate the interactions between vertebrate hosts and vectors of Ross River virus.

Kerri Sutton commenced her Research Assistants position and will spend most of her time in Townsville trialing the sticky lure developed by **Lynda Muir** for her PhD.

Queensland Dept. of Natural Resources

The *Parthenium* biocontrol group have announced that *Conotrachelus* sp. is established on parthenium in central Queensland, and releases continue. A new biocontrol leaflet illustrating the parthenium biocontrol agents has been produced and is available from QDNR and the CRC for TPM. Some *Thecesternus hirsutus*, a root-feeding weevil, have been sent to quarantine facilities at TWRC, Charters Towers, for rearing and host-testing as another potential biological control agent of parthenium.

Graham Donnelly inspected *Penthobruchus germaini* release sites in Central Queensland and addressed a *Parkinsonia* field day at Clermont on the biological control of *Parkinsonia*. He also visited Karratha, WA, to release the mesquite seed

beetles, *Algarobius bottimeri* and *A. prosopis* (Bruchidae) with **John Dodd**, Agriculture WA.

The biocontrol of lantana project has recently acquired *Alagoasa parana* (Chrysomelidae) and *Ectaga garcia* (Oecophoridae) from Brazil, experimentalist **Kristin Latimer** from DPI Toowoomba, and funding from the National Parks of NSW. The imported insects will be held in quarantine for a generation before being mass-reared for release. The funding will be used to supply NSW with biocontrol agents. Specimens of a new lantana species to Australia, *Lantana rugosa*, have been collected from 2 sites near Blackwater. Samples have been sent to Kew Gardens for confirmation of identity. Three species of biocontrol agent were found on the plants, *Lantanophaga*, *Calcomyza*, and *Teleonemia*.

Shipments of *Homichloda barkeri*, *Acizzia* sp., and various geometrids are expected from Kenya for prickly acacia biological control.

USDA Australian Biological Control Laboratories

We were all saddened by the news of the death of **Charley Turner.** Charley became the Director of the USDA Australian Biological Control Laboratory in late 1995. He had been transferred from Albany, California to take over from **Joe Balciunas**. Charley was enthusiastic about his new posting, and enjoyed the Australian lifestyle with his family. He was about to embark on new research on *Melaleuca* biological control when he learned of his terminal illness, forcing him to return to the United States. Charley made many friends in his short stint in Brisbane. He is a great loss to us all, and to science.

Matthew Purcell has rejoined the ABCL after working for over 2 years on water hyacinth. The group is awaiting the release of the Melaleuca leaf weevil, *Oxyops vitiosa*, in the USA. Meanwhile **Kylie Galway** and **Jeff Makinson** are busy working on new agents, a tube-dwelling moth and a gall fly.

CSIRO Entomology Long Pocket Laboratories

Overseas-funded postdoctoral fellow **Pekka Kaitaniemi** (Turku University, Finland; 1 year) and Senior Research Fellow **Tomonari Watanabe** (Japan, Kyushu National Agricultural Experiment Station; 2 years) arrived in Brisbane in March to learn about virtual plant technology and to carry out research projects with **Peter Room** and **Jim Hanan.**

Veronica Brancatini spent 3 weeks in April at a remote atoll, Nikunau in Kiribati - two of the weeks unexpectedly a result of broken down aircraft and bad weather. However, not all bad news, she found very convincing evidence that the predatory coccinellid, *Rodolia limbata* Blackburn, introduced from Darwin had successfully controlled the fluted scale, *Icerya aegyptiaca* on breadfruit. We hear that the crayfish dinners helped to counter-balance the frustrations of delayed departure from the island!

Marc Coombs visited the Bubia Agricultural Research Station near Lae, Papua New Guinea in March to discuss with PNG entomologists **Sim Sar** and **James Ernest**, progress with the collaborative CSIRO/DAL project on biological control of green vegetable bug. Releases of the Argentinian parasitic tachinid, *Trichopoda giacomellii* have begun in the Markham Valley.

Martin Hill, Plant Protection Research Institute Pretoria South Africa spent 5 weeks visiting CSIRO in Brisbane. Martin has been working with a new biological control agent for water hyacinth, a mirid *Eccritotarsus catarinensis*, from Brazil, which he brought with him into the Long Pocket Quarantine where host specificity tests have begun. The group are still working with the moth *Acigona infusella* also for water hyacinth and Martin took a colony back to South Africa with him. During his stay, techniques and ideas were exchanged about managing these insects and about other water hyacinth issues. He accompanied **Mic Julien** on a two week visit to PNG to observe the AusAID funded water hyacinth control project.

CRC for Tropical Pest Management

The CRC for Tropical Pest Management held a Science Conference at a resort in Caloundra from April 20-22. Participants from the DNR, DPI, QWRI, NSW Agriculture, Keith Turnbull Laboratories, UQ, CSIRO attended along with the CTPM funded staff and positive plans were drawn up for future collaborations for existing and future projects including modelling, IPM, heliothis control, weed research, molecular research and software development for education and training.

The Australian Macadamia Society (AMS) has shown a keen interest in the 1996/97 Elaine Brough Vacation Scholarship project completed by **Roy Kimberley** and supervised by **John Foster**.

The project was called "Exploring the role of crop consultants in IPM implementation in macadamia crops in Queensland". Interviews completed as part of the project indicated that crop consultants play a very important role in IPM implementation. The AMS plans to include Roy's report on their internet site and publish a summary in their newsletter. This is another example of industry interest in work done by the DAI team and the CTPM. Well done, Roy!

Queensland Museum

Geoff Monteith and **Robert Raven** travelled down to Lamington in March to give presentations as part of Binna Burra's Ecology Week. **Beth Russell** went with them and saw her first live aradids in the flesh. A large moth found by the Binna Burra manager proved to be a female of the rare hepialid, *Zelotypia stacyi*, not collected in that region before.

Visitors to the museum have included **Hannelore Hoch** and **Manfred Asche** of the Museum für Naturkunde, Berlin and **Thierry Bourgoin** and **Adeline Soulier** of the Museum National d'Histoire Naturelle, Paris. All were in Australia for the Auchenorrhyncha Conference in Sydney and had done field work in caves in north Queensland.

Geoff Monteith had a busy month in April attending a CRC TREM workshop at JCU where he gave a presentation on his wet tropics mapping project. He moved on to the Proserpine area to collect, then met up with **Doug Cook, Chris Burwell** and **Heather Janetzki** to terminate traps at Carmila, Mt Abbott and Mt Aberdeen. More specimens of the giant scydmaenid beetle located on Mt Abbott on an earlier trip were collected. Geoff and Chris then met with **Jeff Wright** (Museum photographer) at Innisfail to photograph insects for the Museum's "Wildlife of the Cairns area" book. They were joined by **Beth Russell** and **Jenny Ovenden** (Zoology Dept., UQ) for further collecting. Geoff then continued on with dung beetle work with **Ross Storey** in Mareeba.

Congratulations go to **Geoff Thompson** and **Caroline Fewtrell** who were married on 7 April. They spent two weeks honeymooning in Tasmania, where undoubtedly Geoff was collecting!

The display "Brilliant Careers" has drawn to a close. It highlighted the careers of numerous women collectors and illustrators including **Margaret Fountaine, Elizabeth and Katherine Dodd, Pat Marks, Elizabeth Exley, Jean Harslet, Josephine Mackerras** and **Valerie Davies**. An attractive well illustrated book outlining the career of 33 women is available through the museum.

Queensland Museum is now on the WWW. Our web page is www.Qmuseum.qld.gov.au

Department of Entomology
University of Queensland

The Department of Entomology welcomes the following people: **Beth Russell** has started her honours project supervised by **David Yeates, Craig Moritz** and **Geoff Monteith**. She is working on a phylogeny of Aradidae from the tropics of North Queensland, using DNA sequence and morphological data. She hopes to use the phylogeny in a biogeographic study of the rainforest blocks in which these bugs occur. **Jeff Skevington** has arrived from Canada. He will be continuing his studies of the Pipunculidae (Diptera), particularly focussing on the genus *Eudorylas*.

Tony Clarke has joined the department to work as a postdoctoral fellow with **Myron Zalucki**. Tony is a past student of the department, and has returned after a stint with the CRC for Hardwood Forestry in Tasmania. Tony is working on a project analysing the 3-dimensional movement of insects on plants.

The department of entomology, however, bidded farewell to two technicians, **Ros Schumacher** and **Leo Sio**, and to **Sonya Broughton** who has left the department for a job in Cairns with DPI.

Meanwhile **Laraine Law** is conducting a review of the pests and pest management of the Queensland Cultural Centre. **Mustapha Jallow, Manon Griffiths** and **Seemi Khan** have all submitted their theses for examination. **Jan Green** has published a book arising from her PhD thesis: "Field Guide to Spiders". **Martin Taylor** has become an Honorary Associate of the Department. Martin was a student of the department in 1991 and has been in the USA for the last 5 years. **Margaret Schneider** has received a Short Fellowship to complete her PhD studies.

Philip LaBrie went to Costa Rica for two weeks for the First International Congress of Butterfly Exhibitors and Suppliers. Although unable to collect, topics discussed included: diets for mass production of butterflies, viral and other disease control, conservation issues, and directions in

butterfly farming.

Toni WITHERS
Regional Councillor

Queensland Fruit Fly Modelling, the inside story

Researchers and managers interested in modelling the population dynamics and management of the Queensland fruit fly (QFF), gathered at a Modelling Workshop in Brisbane on 4-5 March 1997. The meeting, organised by **Bob Sutherst**'s climate change projects funded by DEST (NGAC) and RIRDC, was attended by **Malcolm Campbell, Bernie Dominiak, Andrew Jessop** and **Victor Rajakulendran** from the Tri-State Fruit Fly Management Team, **Ben Collyer** and **Geoff de Zylva** from CSIRO Entomology in Brisbane, and **Derek Maelzer, David Adamson, Jay Harper** (visitor from USA), **Gunter Maywald, Bob Sutherst, Peter Timmers, Tania Yonow** and **Myron Zalucki** from the CRC for Tropical Pest Management.

The group elected to form a long-term collaborative team called the Australian Group for Fruit Fly Modelling (AGFFM). It aims to use population models to improve management decision making by increasing our understanding of the geographical distribution and relative abundance of the Queensland fruit fly, and identify gaps in our knowledge of the ecology of this species.

Much research effort has been expended on QFF over the years at many locations throughout Australia. AGFFM is using the generic population model building and simulation package being developed by the CRC for Tropical Pest Management to synthesise existing information into a model of QFF population dynamics. This model is being validated by **Malcolm Campbell, Bernie Dominiak, Andrew Jessop** and **Victor Rajakulendran** in different regions and will be used to interpret existing abundance data across Australia, and so identify important relationships missed by more localised studies. Many of these localised studies have been carried out near the edge of the species range. One exciting prospect is the use of the model by **Derek Maelzer, Tania Yonow** and **Myron Zalucki** to analyse **Alan May**'s painstakingly gathered data on fermentation trap catches across numerous sites in Queensland, well within the core of the distribution of QFF. This unique data has remained salted away in his thesis and surprisingly has never been thoroughly analysed. The model is also being used by **Tania Yonow, Ben Collyer** and **Bob Sutherst** to evaluate the likely national cost of climate change, caused by the enhanced greenhouse effect, on the QFF problem. Future meetings will assess the performance of the model and plan collaborative projects to further our understanding of fruit fly ecology and management.

Models, as we all know, are invaluable tools for determining the effectiveness of population management strategies. When such options as male sterile release are applied across large areas it is not possible to gauge their effectiveness and impact, without some estimate of what numbers would have been like without control. Experiments at this scale would be costly and politically difficult. A validated model can give an indication of what has been gained in management and explore alternatives. As in all modelling exercises, one rapidly identifies gaps in understanding and this leads to further critical field and laboratory experiments. The value of a modelling approach as an organising framework for research is that the experimental results are kept relevant to the questions identified, and the results can be put to immediate use.

The AGFFM is intended, first and foremost, to be a national, collaborative effort. AGFFM recognises the benefits of working at a national scale and sharing data, knowledge and expertise from different regions and growing situations, so that pest managers in all States can benefit. More importantly, the collaboration is aimed at helping to solve a major pest problem for Australian horticultural producers. It is hoped that the exercise is a pathfinder project for the development of a national perspective on pest management through the assembly of a string of such collaborative interest groups to harness the nation's dwindling expertise and knowledge. If you want a copy of the informal Workshop report or if you are interested in forming or joining any future collaborative teams, please contact **Bob Sutherst**

Email: R.Sutherst@ctpm.uq.edu.au
Tel: 07 3365 1867
Fax: 07 3365 1855

Derek MAELZER and Myron ZALUCKI
CTPM, University of Queensland

University of Queensland
Gatton College.

Congratulations to **Neil Heather,** former DPI entomologist and now an Honorary Research Consultant, who was awarded the University of Queensland Gatton College Council's prestigious Gold Medal Award for 1996. Neil's pre-retirement career spanned 44 years and included research into timber pests, stored product pest management, and more recently involved the development of post-harvest treatments for fruit flies in fruit and vegetables.

Errol Hassan has been busy. He presented a seminar on mosquito control in homes to the Toowoomba Naturalist Club. Ms **Juriko Sakaguchi,** Director of Samtech (Japan) visited Errol at Gatton to discuss the effectiveness of phytopesticides and organic insecticides. Possible collaborative research work was covered. Errol also had lengthy discussions on vegetable pests and general pest control with Assoc Professor **Luo Xinyi** and Dr **Wang De,** Director and Deputy Director respectively, of the Institute of Animal Science, Heilongjiang, China. In early April Errol presented a paper on phytopesticides at the International Biodiversity Conference held in Costa-Rica.

Bureau of Sugar Experiment Stations

Peter Allsopp attended a Sugar Conference in Mexico in February where he failed to win the Golden Microphone award for asking the most questions - apparently the competition was pretty hot. Peter also visited **Dan Potter** in Kentucky. He reports that the temperature was the same in Kentucky as in Bundaberg, 31 degrees. Pity one was Centigrade and the other Fahrenheit.

Paul Farrell has joined BSES to work on projects with **Peter Samson.** Paul spent several weeks being inducted in Bundaberg before moving to Mackay.

DPI, Nambour

Geoff Waite has been a regular visitor to the Philippines in the last couple of years with his involvement in a multidisciplinary ACIAR project concerned with the development of sustainable farming systems on steep lands. One of the project sites is in the mountains in southern Mindanao and is difficult to access due to atrocious roads. However, Muslim activists also provide some excitement and the last visit had to be cancelled due to a rash of kidnappings. Geoff is also gearing up to commence a long-awaited project on fruitspotting bugs. Because of the number of crops attacked and different industry bodies having a say, final agreement after five years was a triumph, to say the least!

Roger Broadley reports that a new book called "Citrus pests and their natural enemies - Integrated pest management in Australia" is due out in late April. The book, which has had a four year gestation, has been prepared by a team of about 24 citrus entomologists and pest scouts. It contains about 400 colour photographs, distribution maps, and information on over 105 citrus pests in Australia.

DPI, Toowoomba

Gordon Simpson's mirid research team has recently been expanded by two. **Claude Rodriguez,** formerly with **Myron Zalucki**'s AQIS project, is undertaking field sampling and work on temperature responses of the green mirid. Claude is also responsible for arranging unrecognised mirid species for identification by **Mali Malipatil** at Burnley. University of Southern Qld student **Renee Cornford** won a CTPM Vacation Scholarship and undertook a project to develop and apply a suitable bioassay technique to determine insecticidal dosing responses of green mirids. She has returned to her studies at USQ, but has been replaced on the team by **Shay Simpson.**

Who needs a university education? Overheard in the Toowoomba laboratory: New appointee, discussing work on the phone with a colleague: "I keep forgetting the names of these wasps. (Turning to laboratory staff in general) What's the name of a small wasp starting with 'M'?" Casual assistant (a recent graduate): "*Trichogramma*!"

In the meantime **Dave Murray** attended the Beltwide Cotton Conference.

DPI, Bundaberg

Iain Kay attended the first National Tomato Conference in early February at Surfers Paradise. **Lynne Grbin** (CTPM) and **Paul De Barro** (CSIRO) were also there. There was little entomology at the conference, but the conference dinner was a highlight. Tomato soup followed by chook in a tomato sauce, and for dessert there was- - - TOMATO mousse. Fortunately there was a good supply of wine.

Iain KAY
Regional Councillor

SOUTH AUSTRALIA

Department of Crop Protection
The University of Adelaide

Prof. **Otto Schmidt** has commenced a six-month study leave in the USA. He will spend most of his leave at the University of Seattle. **Andy Austin** is the acting Department Head in Otto's absence. **Gary Taylor** has completely revised the Department's documents on the World Wide Web. Have a look at:

http://www.waite.adelaide.edu.au/Crop_Protection/Crop_Protection.html.

Scott Field has been awarded a PhD degree for his thesis on patch exploitation and defence in *Trissolcus basalis*. Scott is now a postdoc at the Hebrew University of Jerusalem. **Sassan Asgari** has submitted his PhD thesis on host defense against parasitism by the braconid wasp *Cotesia rubecula*. He is now working on the rabbit calicivirus project.

Sheridan Purvis was awarded the T.O. Browning Medal for her outstanding performance in undergraduate entomology. New Honours students in the Department include **Sarah Whiteley** who is studying disinfestation of table grapes with **Peter Bailey** (SARDI), **Robert Wynn** who is studying travel costs and patch residence times in *Cotesia rubecula* with **Mike Keller**.

School of Biological Sciences
Flinders University of South Australia

Mike Schwarz's group has grown a little more and is consolidating work on social thrips, with **David Morris** and **John Zammit** starting PhDs on social *Acacia* thrips and another group of phlaeothripine forming and invading woody galls on *Casuarina*. David will be based part time with **Steve Cooper** at the Evolutionary Biology Unit, S.A. Museum, for DNA sequencing work.

Kristi-Lee Bejah is also doing her honours on thrips, looking at behaviour of the social *Acacia* thrips, *Oncothrips tepperi*, in relation to defence against the kleptoparasitic thrips genus *Koptothrips*. **Brenda Kranz** obtained a fellowship with the Canadian and International Scholarships Program to undertake DNA work on thrips with **Bernie Crespi** at Simon Fraser University in Vancouver.

Mark Stevens and **Nathalie Loussert** will finish honours projects on applying the Central Limit Theorem to allodapine brood rearing and cladistic studies of allodapine bees respectively. **Remko Leijs** continues sequencing work on xylocopine bees and would appreciate any *Xylocopa* specimens, from Australia or elsewhere, suitable for DNA sequencing. If anyone can help out we can send instructions for collecting and suitable preservatives and vials for mailing.

Pam Hurst is close to completing her PhD on the social behaviour of the allodapine bee, *Exoneurella tridentata*, and is currently running protein gels to determine relatedness within and between colonies. **Nick Bull** and **Adama Cronin** follow close behind and are also investigating relatedness of their allodapine bees. **Ni Watiniasih** is finishing her Masters on *E. eremophila* and will return to Bali early next year. **Zeta Steen** has developed captive breeding in an endangered *Lestis* bee from Kangaroo Island. Overseas visitors to the lab in 1997 include **Jeremy Fields** (University College London), **Dhruba Naug** (Centre for Ecological Sciences, Bangalore), **Bernie Crespi** and **Tom Chapman** (Simon Fraser University,) and **Letitia Silberbauer** (University of Witwatersrand).

Mike KELLER and Gary TAYLOR
Regional Councillors

TASMANIA

Following the sudden departure of our recently elected Tasmanian Regional Councillor, **Tony Clarke**, who has migrated to warmer pastures, **Jane Elek** has been accepted as the new Regional Councillor.

Department of Agricultural Science
Resource Protection Program
CRC Temperate Hardwood Forestry.

Martin Steinbauer and **Terry Bowditch** successfully completed their PhD's on Tasmanian coreids (taxonomy, biology, behaviour and ecology) and Development and implementation of a pest management program within an export, confectionery company (Cadbury) respectively.

John Madden was invited as a key participant in a *Sirex*-parasitoid culture workshop held at EMBRAPA, Curitiba, Brazil in November.

The Resource Protection Program has lost a most valuable member when **Tony Clarke** and family returned to Brisbane to take up a grant at the University of Queensland (Rebecca did some great drawings on visits to Dad's office). Tony was

the first post-doctoral appointment in the RPP and excelled in research, undergraduate teaching and in providing encouragement and advice to post-graduate students. We all wish him well.

Richard Milner visited the RPP in December for discussions with the project team investigating the potential of *Beauveria* and *Metarhizium* to control eucalypt defoliating beetles.

John Madden joined with the CRC Director and other program managers in reporting CRCTHF activities to the first meeting of the Royal Society of Tasmania on the NW Coast.

The Resource Protection Program at the CRCTHF has a new lease of life since the CRC was extended until 2004. So, with Tony's departure and John's imminent semi-retirement (for details contact John!) there should be two new entomology positions to be filled after July.

Tasmanian Museum and Art Gallery

Collection management and public displays claim 90% of the curators' time at the Tasmanian Museum and Art Gallery but **Roger Buttermore** and **Liz Turner** are trying to fit achievable research into their programs! Roger's paper "Observations of Successful *Bombus terrestris* (L.) (Hymenoptera: Apidae) Colonies in Southern Tasmania", which summarises work done in 1995-96, has been accepted by the Australian Journal of Entomology for publication later this year. Presently he is writing up the results of an experiment conducted late last year, in association with the owner of a New Zealand commercial bumble bee production company as well as **Trevor Semmens** and **Ray Hart** of the Department of Primary Industry & Fisheries, Tasmania. Under the auspices of a HRDC grant, they conducted rearing trials in Hobart to assess the genetic base of Tasmanian bumblebees. The Tasmanian bumblebee population is inbred but obviously not critically so. the data suggest that the entire population of *B. terrestris* in Tasmania is descended from a single fertilised queen. This is a unique situation which may be of great interest to bee geneticists and evolutionary biologists. Roger is trialing placement of nest boxes in bush areas next spring. This is a method used by New Zealand bombologists to monitor queen establishment/colony success and may have some application here.

Department of Primary Industries and Fisheries

Lionel Hill and **Trevor Semmens** continue to develop an annotated checklist of Tasmanian invertebrates as part of a database project. Export quarantine has been the driving force for this project. Lionel was surprised by the sudden appearance of PLATYPUS and wonders what the future is for coordination of specimen and nomenclatural database projects around Australia. Trevor has been enthusiastically commenting on a draft of Greg Daniel's' mighty bibliography. Western Flower Thrips have consumed lots of time for all associated with state quarantine work but management outdid the thrips by organising, on a grand scale, yet another corporate planning exercise replete with facilitaters, free lunches and feelings of ownership.

Forestry Tasmania

Those who were working on control of the chrysomelids in eucalypt plantations over the summer, **Jane Elek** and **Dick Bashford,** are moving into overwintering mode to try to explain why Btt is not as effective a bioinsecticide in the field as in the lab, and explore other methods of biological control. Dick was also involved in monitoring for incursions of Asian Gypsy Moth; AQIS funding allowed five shipments to be monitored, with no detections to date. Professor **Tosia Kumata** (Hokkaido University, Japan) and his wife visited the state and searched for gracillariid leaf miners with Dick's guidance.

Jane ELK
Regional Councillor

VICTORIA

CSIRO Forestry and Forest Products, Clayton.

In May (25-30) **John French** and **Berhan Ahmed** will attend the International Research Group on Wood Preservation 28th Annual Meeting at Whistler, B.C. Canada. They will be presenting three papers on their termite research and catching up with old friends and colleagues. Afterwards, John is going to Europe, termiting and visiting family and friends; whereas Berhan will drop into the University of Maryland to visit **Barbara Thorne**, and University of California, Berkeley, to visit **Vernard Lewis**.

John French has accepted an adjunct professorship at RMIT, Toxicology Department, and will be researching termite attractants,

enzymes and toxins. He was training his young boxer dog to sniff for termites, but alas, she succumbed to cancer. He's thinking of training a young pig next time!

Rachel Peters and **Lucy Rogers**, two Honours students at Melbourne University, being co-supervised by **John French**, gained first class honours. They researched on trophallic behaviour and why termite mounds have so little vegetative cover. Congratulations Rachel and Lucy.

Dr **Kunio Tsunoda**, University of Kyoto, Wood Research Institute, Kyoto, Japan, visited the laboratory last month on his way to New Zealand. He was shown our latest termite baiting research and came with us to see termite baiting in action in several infested buildings in Melbourne.

University of Melbourne
Department of Genetics

Jon Martin has supplied the following preliminary report for the AES Research grant: "Molecular relationships in the ancient chironomid genus *Archaeochlus* Brundin" (J. Martin & P.S.Cranston in collaboration with D.H.D.Edward).

Pete Cranston and **Don Edward** both went to a conference in Africa last November and, with the help of some of the grant funds went on a field trip to collect material of the African *Archaeochlus*. They were successful in obtaining a good collection of *A. drakensbergensis*, and also of all stages of the sister group species *Afrochlus harrisoni*. This material will now be included in the molecular analysis.

There has been some question as to whether *Afrochlus* was really a separate genus and the immature stages were needed to resolve this question. Pete and Don have a manuscript in the final stages of completion to describe the immatures of *Af. harrisoni* and show that it is truly the sister group rather than a member of *Archaeochlus*.

Jon has extracted DNA from the African material and is ready to compare it with Australian material, initially using sequence from the mitochondrial cytochrome oxidase I (COI) gene.

La Trobe University
Department of Genetics and Human Variation

Roger M Lowe has departed from **Ross Crozier**'s lab with his PhD thesis on the interaction between *Exoneura* bees and their social parasites of the genus *Inquilina* warmly accepted by the examiners. Roger now shifts to ant work, as a postdoc in the team of **Bert Hölldobler** and **Jürgen Heinze** in Würzburg and Erlangen.

Agriculture Victoria
(Rutherglen, Horsham and Hamilton)

As Agriculture Victoria moves towards attaining "Service Agency" status from July 1 this year, field crop and pasture entomology research may be gaining a subtle but important shift in priority. In the State's grains program, Integrated Pest Management (including pests, diseases and weeds) now rates as one of the five major projects and includes the research activities of **Melina Miles** (Horsham) and **Garry McDonald** (Rutherglen). The project will eventually embrace pest management within cropping systems. Currently, Melina's research interests are in management of native budworm (*Helicoverpa* spp.) in pulses and false wireworms (*Isopteron* spp) in canola. Garry, along with newly appointed entomologist, **Alexei Rowles**, has re-established a redlegged earth mite project (plant resistance in canola) at Rutherglen, but will also be maintaining links with the La Trobe groups (Biochemistry and Genetics) working on earth mites. **David Brown** is another relatively new entomologist at Rutherglen, who is working with **Angela Corrie** on the ecology (particularly dispersal) of grapevine phylloxera. In a final positive note from this group, it has been recently announced that **Ron Prestidge**, a senior entomologist from AgResearch in Ruakura (Hamilton, New Zealand) will soon (June 16) take up his position as Director, Pasture and Veterinary Institute at Hamilton, Victoria. We now hope that the sad decline in pasture entomology in Victoria over the last decade can be dramatically reversed!

Agriculture Victoria
IHD, Knoxfield

Kelvyn Dunn and **Mali Malipatil** have continued to conduct regular training courses in identification of Western Flower Thrips and other common thrips. Since August last year over 250 persons, predominantly nursery growers and AgVic staff have attended these courses.

Ken Walker (Museum of Victoria) visited the Victorian Agricultural Insect Collection (VAIC) to assist with the refurbishment of the original collection database commenced in 1989. The database is based on KE Texpress. Currently the thrips specimens are being entered.

Jan Botha, an entomologist from Stellenbosch Institute in South Africa, discussed vineyard pests with researchers at the IPM Viticulture: Research to Practice workshop held in Mildura in April. This workshop series, lead by **DeAnn Glenn** is being developed to help growers adopt an IPM approach in Australian viticulture. There has been a lot of interest in the use of *Trichogramma* to control lightbrown apple moth in vineyards.

Institute of Sustainable Irrigated Agriculture Tatura Centre

Alexandre Ilitchev, senior entomologist, reports on his new project: "WIDE AREA MATING DISRUPTION OF ORIENTAL FRUIT MOTH is a really big experiment."

Control of Oriental Fruit Moth (OFM) by using Isomate OFM Plus for mating disruption technology is a key part of Integrated Pest Management in Goulburn and Murray Valley orchards. However, in recent years it has been necessary to over spray some Isomate treated blocks with insecticides. Research into the possible causes of this problem suggests that migration of mated females from pear and other non-mating disruption blocks can cause breakdown of control in Isomate treated peach and nectarine blocks. The next step to defend orchards against migration is Wide Area mating disruption.

A trial to test the concept of Wide Area mating disruption over 700 hectares in Cobram has been organised for next season with the help of the Victorian Peach and Apricot Growers Association (VPAGA). The Wide Area will be saturated with OFM pheromone by treating every fruit tree with Isomate OFM. This will include all those species like pears, apricots and plums in which mating disruption is not normally used. The total area is large enough to overcome any edge effects and OFM migration problems. Also this particular area was chosen because most of the growers in it have had substantial experience in managing mating disruption and interpreting monitoring data. The area will be closely monitored for OFM throughout the season and orchardists will be informed in detail about the current situation with OFM and other related pests including *Carpophilus* sp. which is expected to become a more important problem in OFM mating disruption orchards.

We expect that this approach will be more reliable and more cost effective than combining Isomate and chemical overspraying. Reduction of insecticide usage will be an environmental benefit of this project. This is a large and extensive project, which could not occur without the support of the Horticultural Research and Development Corporation, Canned Fruits Industry Council of Australia, Victorian Peach and Apricot Growers Association, Cobram Fruitgrowers Association, Biocontrol Pty. Ltd., I.K. Caldwell Pty. Ltd., and the Cobram fruit growers involved in the Wide Area trials.

Nancy ENDERSBY
and Robyn COY
Regional Councillors

WESTERN AUSTRALIA

Western Australian Museum

The entomology section received brief visits from **Ebbe Nielsen** (looking for castniid moths) and **Archie McArthur** (*Camponotus* ants) in February and **James Walker** (*Calolampra* cockroaches) in March. **Terry Houston** has been very busy coordinating arrangements for a one-day symposium "Pollination Ecology in Western Australia" to be held in Perth on 4 July. The symposium, intended to be just a local affair, had attracted 45 potential participants by mid-April. Terry has also resumed work in earnest on a revision of Australian hylaeine bees.

Agriculture Western Australia

Debbie Thackray is going on tour in June and hopes to drop in on a few other members of the AES as she takes six months off to travel around Australia. Her interests include insect pest control, pest resistance mechanisms in plants and modelling and forecasting pest and virus incidence. She'll be returning to AgWA in January 1997 to work for CLIMA, modelling and forecasting aphids and viruses in lupins and cereals.

CSIRO Entomology

John Matthiessen has been carrying out a study of the biology and management of African black beetle in turf in conjunction with **Mark Sumner**, WA R&D Officer with Bayer Ltd. during the 1996/97 spring and summer. After the perverse thrill of ruining the delightful 6th and 7th fairways at Melville Glades Golf Club with up to 700 soil cores came the reality of having to neatly plug all the holes with replacement cores. The study is aimed at better defining the biology of African

black beetle in amenity turf and using some new knowledge of quirks in its biology to better target insecticide applications for maximal efficacy. **John Matthiessen** also travelled to Italy in early May to attend the Accelerated Degradation of Soil-Applied Pesticides (ADSAP) workshop, at the invitation of the coordinators. The ADSAP program is a European Union Concerted Action on managing the problems caused by accelerated microbial degradation of soil-applied pesticides, which often leads to inefficient and overuse of pesticides. While in the region, John took time to briefly visit **Mark Lonsdale** and the team at the CSIRO biological control laboratory at Montpellier.

It is a time for weddings in the entomology group at CSIRO. Congratulations to **Celia Brown** on her engagement to **Darius Parvi** who plans to marry in November and to **Kathryn Robinson** who is marrying **Matthew Bachelor** on 10 May. Work on ecology and biology of redlegged earth mite has been concentrating on predicting the onset of diapause in the spring, in collaboration with **Bert de Boer** of the Biometrics unit. **Shao Fang Wang** is progressing well in her work of identifying the compounds involved in resistance of trifoliate leaves of subclover and of one of the alternative pasture legumes to redlegged earth mite. On the resistance front **James Ridsdill-Smith** together with **David Henry** and **Jenny Reidy Crofts** are looking to field test a penetrometer (originally from **Don Sands** in Brisbane) to screen subclover lines for seedling resistance to the mites. When not doing research we are developing strategic plans and restructuring, as elsewhere the world of entomology.

Zoology Department
University of Western Australia

In late April **Win Bailey** embarked on a three month tour of Australia with wife Ruth, during which they aim to visit their daughter and her family in Mt Isa.

Entomology, Agriculture WA

Françoise Berlandier, Rob Emery, Linnet Cartwright, Romolo Tassone and **Terry Houston** (WA Museum) were lucky to be invited to an advanced screening of the wonderful film "Microcosmos", which will open in Perth in June 1997. This French production features some of the best insect footage ever filmed. All that attended pronounced the film to be excellent and fascinating. Not in the usual documentary genre, Microcosmos is a visual feast featuring a range of insects shot from interesting angles and stunning detail. There is a brief narration at the start, then only a blend of natural sounds and specially composed music. I strongly encourage anyone with an interest in Entomology to attend this film!

Laurence Mound from ANIC (CSIRO Canberra) called in to AgWA en route to the Pilbara in WA's northwest on a gall-forming thrips expedition. He talked with **Ian Dadour** and **David Cook** on the interesting findings they are uncovering with western flower thrips mating behaviour and sex allocation as part of their ARC Grant. Laurence was accompanied by Prof **Bernard Crespi** (Simon Fraser Uni, British Columbia) and several PhD students working on thrips. Unfortunately **Natalie Keals** has been a casualty of the Agencies downsizing and her excellent job of handling the stable fly project has been handed over to David Cook.

Curtin University of Technology

The Entomology Laboratory has recently swollen to bursting point. On his return from Queensland, **Brian Heterick** has taken up part-time employment to sort and identify various ants from regional collections throughout Western Australia. His efforts were assisted by a short visit from **Archie McArthur** of the South Australian Museum. As a result of their joint efforts, the catalogue of Western Australian ants will shortly by placed on the Social Insects homepage. This homepage also has an extensive display of photographs of various Australian ants, taken by the late **George Lowe.** The homepage can be accessed on: http://research.amnh.org/entomology/social_insects/siwwork.html In addition, three new PhD students have arrived. **Lubomir Bisevac**, (ex-Belgrade University) will be evaluating the practical use of invertebrates in Completion Criteria for rehabilitated minesites. **Karl Brennan** (ex-University of New South Wales) will be looking at the secondary influence of fire in rehabilitated minesites on the succession of selected arthropod groups. Finally, **Erich Volschenk** (ex-James Cook University) will be revising the taxonomy of the *Lychas* scorpion genus. **Jonathan Majer** is basically doing nothing - he's too busy supervising these students!

Françoise BERLANDIER
Regional Councillor

NEWS FROM AFFILIATED SOCIETIES

ENTOMOLOGICAL SOCIETY OF QUEENSLAND

David Yeates, lecturer in the Dept of Entomology, University of Queensland, has replaced **Judy King** as President of the Society.

OVERSEAS NEWS

NEW GUINEA

Rehousing of Entomological Collections

The large entomological collection of the Department of Agriculture and Livestock (DAL), containing about a quarter million specimens and collected over a span of forty years, is now housed in a modern building provided by the Australian Government through its AusAid Program in Papua New Guinea. Also housed in the same building is the plant disease herbarium. Unfortunately, the entomological collection has no curator. A committee of the officers of the Agricultural Protection Division considers granting permission to scientists interested in using the collections. The collections will eventually become a part of the National Agricultural Research Institute (NARI) when it becomes operational.

Biological Control Workshop at Lae

This conference, to be held at Lae from 4-6 August 1997 is calling for papers on all aspects of biological control of weeds, insect pests and plant pathogens. A proceedings will be published. For further information and registration, contact:

Roy Masamdu
Bubia Agricultural Research Centre
PO Box 1639
Lae, Papua New Guinea
Tel/Fax: (675) 4751189

or

Lastus Kuniata
Ramu Sugar Ltd
PO Box 2183
Lae, Papua New Guinea
Tel: (675) 474 3299
Fax: (675) 474 3295

New Entomologist at Keravat

Tanya Stathers has recently joined the Entomology Section of the PNG Cocoa Coconut Research Institute, concentrating on the use of entomopathogenic fungi in the control of black palm weevils.

Outbreak of Stick Insect

An outbreak of the stick insect *Anchiale maculata* (Oliv.) has been reported from several cocoa plantations in the Gazelle Peninsula.

Papers of entomological interest

PNG Journal of Agriculture, Forestry and Fisheries, Volume 39(2), December 1996, contains a paper on the crazy ant, *Anoplolepis longipes* on coconut palms in New Guinea by G.R. Young. For the botanist, there is a 157 page bibliography of the flora and vegetation of Papua New Guinea. Volume 39(1), June 1996, had a catalogue of the Dinidoridae of the World as well as two papers on the crazy ant by G.R. Young.

Ray KUMAR
PNG Correspondent

NEW ZEALAND

Lesser of two weevils?

Dr **Barbara Barratt,** a past President of the Entomological Society of New Zealand and Program leader at AgResearch, Invermay is involved in biocontrol. The following article was written by AgResearch Journalist **Noel Humm** of Grasslands.

Barbara Barratt's paper on the impact of biocontrol agents proved highly popular at the XXth International Entomology Congress, held in the historic city of Florence, Italy. Her work is one of the first examples of credible research on non-target effects of introduced biological control agents because it has produced quantitative data.

Barbara's team is part of the new Grasslands Division group based at Invermay. Her science focuses on environmental impact of biocontrol agents with a view to improve agent selection and quarantine protocols.

The research has covered two introduced parasitoids:

- *Microctonus aethiopoides* (MA) which was introduced in 1982 to control sitona weevil.
- *Microctonus hyperodae* (MH) introduced to control Argentine stem weevil in 1991. These agents have been used by Barbara's team for host range testing in the laboratory and also to

study their impact in the field. The first agent, MA, had very limited quarantine testing before its introduction whereas MH was comprehensively tested. Only one strain of MA was introduced to this country but eight MH strains or ecotypes have been imported. The latter have since been released at several sites and MA is now distributed nationwide.

"Laboratory testing showed us that with MA, 11 of 12 non-target native weevils were parasitised, with an average of 60% parasitism," Barbara reports. "However, the MH has proved far narrower in its host range, parasitising five of 11 native weevil species but with only 13% parasitism."

A similar pattern has been obtained in the field over 17 sites, where MA has so far been found to parasitise 10 native and three introduced weevils, with up to 71% parasitism. The MH agent has parasitised only two non-target species (one was a native weevil) and only 3% parasitism has so far been recorded. "Because there has been a lot of criticism of laboratory host range testing, we are pleased to find that the laboratory tests have been indicative of the field results," Barbara says.

David Steven, IPM Research Ltd (right) poses with the NZ Governor-General after receiving his NZST Medal.

This research program is part of the Grasslands Division environmental thrust to investigate the impacts of pastoral agriculture. "These biocontrol agents could be regarded as a biological pollution," Barbara says. "We need longer-term results from the natural environment as well as the pastoral environment."

John TENQUIST
NZ Correspondent

Royal Society of New Zealand Science and Technology Medals

David Steven of IPM Research Ltd, Takapuna, NZ, was awarded a New Zealand Science and Technology Medal by the Governor General of New Zealand on February 25. These medals are awarded to persons or groups for "conspicuous, continuing contributions to science and technology over an extended period", or for an outstanding specific contribution to New Zealand society and culture.

David's award recognised his contribution in leading the research which developed a very successful IPM system for kiwifruit orchardists. It is called the "Kiwigreen" program and was drawn up for the NZ Kiwifruit Marketing Board for the 1991-92 growing season. It arose in response to Italian authorities using insecticide residues as a non-tariff barrier to protect their local growers. NZ was threatened with losing $30,000,000 of sales at a time when expanding production meant new markets were already being developed as fast as was possible. This year the entire export crop of kiwifruit in New Zealand has been grown using the Kiwigreen techniques - 60,000,000 trays or about 200,000 tonnes of fruit. The key elements are monitoring systems for the two key pest groups - armoured scales and leafrollers - plus the use of oil and Bt sprays, especially close to harvest. A limited number (up to 3) sprays of diazinon are allowed immediately after flowering which is the critical time for leafroller damage. The core is that all sprays are applied only when a clear need can be shown. The push for uptake has come from the NZKMB, who appointed a Field Manager to drive the implementation, and who for the first 4 years covered the direct costs of monitoring (about 3

cents per tray, with average production reaching 5700 trays per canopy hectare).

Despite his active role in driving and developing the Kiwigreen Program, David is keen to point out that many people were involved in the R&D - he was just one.

FASTS NEWS

(Federation of Australian Scientific and Technological Societies)

March

1. The Careers Forum

The National Press Club was the ideal location to make the important national point that S&T is part of the mainstream of life, and needs to be taken into account with all the other factors in setting national policy.

Both the Minister for Science and Technology **Peter McGauran** and Shadow Minister **Martyn Evans** made interesting contributions to the Forum on science careers at the National Press Club on March 19.

The Forum was organised jointly by FASTS and the National Tertiary Education Union, and brought together 150 people from research, industry, government and science funding bodies.

There was wide participation by industry, funding agencies, the universities, and (most pleasing) young research scientists. The event was sponsored by several FASTS Member Societies, the Pharmaceutical Manufacturers Association and the Academy of Science.

The Minister committed himself to work with the science community "to create an environment in the public sector and in the private sector that funds R&D and therefore employs scientists, technologists and engineers and provides them with a career path."

He talked about the cultural change in the science community since he was Shadow Minister, and said the image of the "whingeing, befuddled scientist demanding unending funding" had been replaced by a new professional approach in dealing with Government by the research agencies, academies and societies.

Minister McGauran may have ended up with the media headlines: "Minister riles scientists with stern warning" and "Scientists hit back at Minister" for his provocative opening remarks, where he cautioned science groups about the negative impact of "shrill, over-blown exaggerated whining and wailing." but his talk was a clear indication that the capacity and inclination of Governments today to create positions for research scientists are limited. The old ways have gone, and anyone wishing to influence the course of national policy has to recognise that.

He emphasised that there are rewarding jobs for scientists and technologists, and urged those present to "enthusiastically tell young people of the exciting opportunities of a career in science and engineering," particularly in the private sector.

Shadow Minister **Martyn Evans** advised scientists and engineers to adjust their value systems and think more positively about the opportunities to work in other fields than those for which they have been specifically trained.

"The job context in which today's graduates find themselves is interdisciplinary, demands collaboration and is based on a global economy. Science is an excellent general degree to train young people to be adaptable and flexible and to respond better to the needs of our technologically advanced society."

The full text of both speeches is up on the FASTS' web site. FASTS is currently considering its response to the ideas which came out of the Forum.

2. FASTS Board meeting in March

The FASTS Board decided that it would not revise the Policy Document this year because the current policy was still appropriate in this part of the election cycle.

The Board agreed to discuss the Top Ten Policies for 1998 at the November Council and Board meetings, with a view to making a public statement on 1 January. This list has taken an increasing importance, and the advice of all Member Societies will be sought.

The next Board meeting will be held in Sydney on June 6.

3. Bringing the S&T interests together

FASTS hosted a meeting of S&T organisations to discuss submissions to the West Review of Higher Education. Dr **Doreen Clark**, one of the two scientists on the Review panel, was invited to discuss the Panel's general approach and answer questions.

The meeting provided a valuable occasion for these groups (including the Academy of Science, the Deans of Science, the CRCs, the AV-CC, NGASS - the Next Generation of Australian

Scientists Society - and the NTEU) to compare notes, as well as to hear from Dr Clark how the Review will proceed.

4. The West Review submission

The draft FASTS' submission to the West Review is on the web for comment, and suggestions should be directed to **Chris Easton**. A final submission has to be in by April 24.
Contact points:

Chris Easton: easton@rsc.anu.edu.au; or fax 06-249 0750)

FASTS' web site:
bimbo.pharmacol.su.oz.au/fasts/fastshome

5. Letters to Ministers

FASTS has raised a number of issues at the Federal level this month. These include a letter to the Prime Minister, urging him to support the continuation of the Factor (f) scheme which has helped build up a strong pharmaceutical industry in Australia.

I wrote to Senator **Rosemary Crowley**, Chair of the Senate Committee on Employment, Education and Youth Affairs, asking her to give special consideration to the supply of properly-qualified teachers of mathematics and science in their investigations. The terms of reference of the Committee now include this area, and FASTS will be making a formal submission.

We have also communicated with the Victorian Government with respect to their S&T policy, and have been invited to make a submission to their review of the demand for tertiary studies in S&T.

6. WISENET first Affiliate Member

I am delighted to announce that the Women in Science Enquiry Network (WISENET) has accepted our invitation to become the first Affiliate Member of FASTS. This category of membership is open to groups which are not professional or learned scientific or technological Societies, but do share the broad aims of FASTS.

WISENET will bring an important new voice to discussions within FASTS, and help us make representations on matters which particularly affect women.

7. Media

FASTS has maintained an active presence in both the general and sectional areas of the media, and we are frequently rung by journalists seeking comment. Coverage this month included the Financial Review, the Australian, the Sydney Morning Herald, the Canberra Times and ABC TV and radio.

April

1. FASTS goes West!

The FASTS submission to the West Review of Higher Education has called on Government and universities to work together to create an efficient, competitive, well-equipped university sector.

The increase in the student numbers combined with a decrease in the funding per effective full-time student has put enormous strains on university budgets. Current realities are that not all 37 universities in Australia can offer top-level scientific and technological facilities in education and research in all disciplines.

Reorganisation of the higher education sector is required - and the rearrangements will not be minor. FASTS investigated and considered the consequences of three alternative courses of action in our submission:

a. closing some universities
b. refocussing the universities within a regional area to eliminate course duplications
c. concentrating infrastructure support on the highest-performing departments.

We also urged further support for infrastructure - libraries, labs, buildings and equipment - to accompany the process of reorganisation and pointed out that it is almost impossible for university graduates to meet industry expectations unless the university equipment they use matches industry standards.

Many university laboratories no longer meet basic occupational health and safety requirements, and are increasingly operating on outdated and failing equipment.

I have to thank Dr **Chris Easton** for his sterling work in drawing the submission together. A full copy is available on our web site.

2. The Budget

The Budget is being handed down on Tuesday May 13. **Peter McGauran** has again invited me to view the Budget from his office, and to discuss SET matters with him. I am not expecting any dramatic news as far as S&T is concerned, although there have been disturbing rumours about cuts to the CRC program.

We will pay particular attention to the five

matters raised in our pre-Budget submission:

a. the impending shortage of qualified mathematics and science teachers.
b. creating a national vision for Australia which develops specific aims for S&T
c. the restoration of the 150% tax deductibility for industrial R&D.
d. access to high-quality science education and research at Australian universities.
e. a whole-of-Government approach to Australia's Ocean Territory

3. FASTS in science policy

Minister McGauran has continued to express appreciation for the role FASTS plays in policy formulation. In a recent letter, he said he had instructed his Departmental officers to seek our advice on international scientific collaboration.

He has also invited me to discuss with Chief Scientist **John Stocker** Victorian initiatives to set priorities for S&T, which were views I initially raised with the Minister.

The role of FASTS in policy areas was the subject of a television interview which **Lesley Warner** of UCQ recorded with me for the Open Learning Program. It turned out to be a good discussion of FASTS' role in policy, and Member Societies might find it useful to show to their meetings. Copies can be borrowed from the FASTS' office.

4. The WISET Report

WISET made recommendations about boosting the participation of Women in Science, Engineering and Technology (WISET). It was completed in May 1995, and has since disappeared into a black hole. The Labor Government failed to respond in its final months of office (although the Report was commissioned by one of its Ministers).

The new Government has declined to make a formal response to what it sees as a Labor initiative, so even though the Report has been dubbed "a valuable analysis" it still lies dormant. We are urging the Government to take a more active interest in its findings.

Australia suffers because the whole area of SET "expresses a strong sense of masculine ownership" (WISET p3), to the extent that only 6.9% of staff in engineering and processing in higher education institutions are women.

5. Affiliate members

A number of groups have been invited to become non-voting Affiliate Members of FASTS, at the discretion of the Board. They all have an interest in S&T policy and share the broad aims of FASTS but do not fit the narrow definition of a professional or learned society as set out in the FASTS' Constitution.

I believe that the support of these groups will bolster FASTS' capacity to represent the broad interests of S&T groups to Government in Australia. Government prefers to deal with large representative groups which cover the broad sweep of interests of that sector, rather than smaller bodies with strong sectional interests.

6. The Stocker Inquiry

The submission and discussion rounds are almost complete, and the final report is expected about June 22. I expect that among other issues the inquiry will comment on the way in which priorities are set in different portfolios dependant on a S&T information base, and on the advisory processes within and to Government.

7. Senate inquiry into Commonwealth powers in environment

The Senate has initiated an inquiry into Commonwealth powers in environmental protection and ecologically-sustainable development in Australia, to be chaired by SA Democrat Senator **Meg Lees.**

An information pack on how to make a submission and the terms of reference are available from Committee Secretary **Robert King** on (06) 277 3525. The closing date for submissions is Friday June 20.

8. John Bell

John Bell, former Deputy Secretary of DIST, has resigned to take up a position as Managing Director of ANUTech at ANU in Canberra from May 19. He has been one of FASTS' strongest allies and supporters, and his resignation places added pressure on the Chief Scientist and his staff in DIST.

9. The newImages Conference

I participated in this Anglo-Australian Conference in Sydney. It compared the roles of the Chief Scientists of the two countries. In the UK the position is supported by 100 staff, but one wonders whether a cost-benefit analysis would show the

advisory function there has been any more effective than in Australia.

Likely outcomes include additional exchanges for young scientists, and a cooperative approach to science festivals of each country. But it is clear that the UK has a definite role in the European Union and Australia a growing role in Pacific Rim SET alliances.

10. Media

President-elect **Peter Cullen** and I had lunch with the Editor and Science Writer of the Canberra Times, to discuss increasing coverage of SET. We were advised to maintain regular contact (not only when we need them!), and make our stories locally relevant.

I still look to every regional newspaper in Australia having regular weekly S&T sections, as the Canberra Times does. **Toss Gascoigne** is a valuable mentor in this area.

A reminder that the excellent talks at the National Press Club by **Ian Lowe** and **Peter Doherty** are available from Media Monitors. Video tapes $40, audio tapes $26, transcripts $50. Ph (06) 239 5233, or fax (06) 239 5244. Both speeches are also on the FASTS' web site (free!)

Joe BAKER
President
FASTS

ELECTRONIC NEWS

The Council of Heads of Australian Entomological Collections (CHAEC) has set up a web site to facilitate more efficient access to Australian and New Zealand collection based resources. Entomological collections housed in Museums, Universities and Departments of Agriculture or Forestry are listed. The web page provides postal addresses, direct email from the web page to the curator or collection manager of most collections and the charter and type holding status for each collection. As well, links to a photo gallery and topics/issues section are being developed.

We hope this web site will assist access to these collections and their staff.

The URL is:
http://www.mov.vic.gov.au/chaec/index.html

Ken WALKER
Museum of Victoria

SASB Web Site

After a rather lengthy delay, version 1 of the World Wide Web Home Pages for the "Society of Australian Systematic Biologists" is now ready. The pages can be accessed at:-

http://www.science.uts.edu.au/sasb/

The "Introducing the SASB" pages will be updated after the General Meeting in Adelaide, when the name of the Society will be formally decided on, and there will be a formal Executive (rather than the current Organising Group).

One of the objectives of the Society is intended to be the lobbying of government agencies and granting agencies; and the results of these activities will be available via the Letters page.

The Conferences pages are intended to include a comprehensive list of upcoming systematics-related conferences, both local and international, with Internet links to the appropriate home pages.

If the Internet Links section succeeds, then it should be the first port-of-call if you are searching for systematics-related information on the World Wide Web.

David A. MORRISON
Society of Australian Systematic Biologists

Queensland Museum Web Page

Queensland Museum is now on the WWW. Our web page is www.Qmuseum.qld.gov.au

Social Insects Homepage

The Social Insects homepage features an extensive display of photographs of various Australian ants taken by the late George Lowe and can be accessed on:

http://research.amnh.org/entomology/social_insects/siwwork.html

COMING EVENTS

INTRODUCTION TO THE DELTA SYSTEM

An introductory course to the DELTA system will be held at the Australian National University, Canberra, Australia, July 7-11th 1997.

The course will cover:

the establishment of character lists
data coding
output of natural language descriptions
generation of printed keys
developing and using INTKEY sets
incorporating images and INTIMATE (INTkey

IMage AnnoTation Editor)
the output of files for phenetic and cladistic programs

The course will be led by Drs **Carolyn Weiller** and **An Van den Borre** (Research School of Biological Sciences, ANU) and **Les Waton** (Albany and Research School of Biological Sciences, ANU).

Further details and registration information are available from the following URL:

http://biology.anu.edu.au/internal/seminars/deltaws.html

Registration: Closes June 6th.
Cost: $200.

AUSTRALIAN ENTOMOLOGICAL SOCIETY
1997 Conference and 28th AGM
28th September - 3rd October 1997
The University of Melbourne

The 1997 Annual Scientific Conference of the Australian Entomological Society will be held at Melbourne University 28 September to 3 October 1997. Details are now available.

Contact:
Nancy Endersby
Institute for Horticultural Development
Agriculture Victoria
Private Bag 15
South Eastern Mail Centre VIC 3176
AUSTRALIA
Telephone: (03) 9210 9222
Facsimile: (03) 9800 3521
E-mail: endersbyn@knoxy.agvic gov au

Sixth Australasian
Applied Entomology Research Conference
"Pest Management - Future Challenges"
29 September - 2 October 1998
in conjunction with
the 1998 Australian Entomological Society 29th AGM and Scientific Conference
26 - 29 September 1998
The University of Queensland
Brisbane, AUSTRALIA

Details: *Myrmecia* **33**(1): 21.
Contact:
Sally Brown
ICTE Conferences
The University of Queensland
Brisbane QLD 4072 AUSTRALIA
ph: (+61 7) 3365 6360
fax: (+61 7) 3365 7099
email: sally.brown@mailbox.uq.edu.au
For further details watch the CTPM web page (http://www.ctpm.uq.edu.au)

Joint Conference of the Society of Australian Systematic Biologists
and the Australian Systematic Botany Society
The University of Adelaide
29th September to 3rd October 1997.

The conference will comprise of four special symposia : computing in systematics, east-west biogeography, the interface between systematics and ecology, and molecular systematics.

For details, join the Society of Australian Systematic Biologists by emailing Mike Crisp at ANU (Mike.Crisp@anu.edu.au).

Biological Control Workshop
Lae, Papua New Guinea
4-6 August 1997

This conference, to be held at Lae from 4-6 August 1997 is calling for papers on all aspects of biological control of weeds, insect pests and plant pathogens. A proceedings will be published. For further information and registration, contact:

Roy Masamdu
Bubia Agricultural Research Centre
PO Box 1639
Lae, Papua New Guinea
Tel/Fax: (675) 4751189

or

Lastus Kuniata
Ramu Sugar Ltd
PO Box 2183
Lae, Papua New Guinea
Tel: (675) 474 3299
Fax: (675) 474 3295

Beneficial Organisms
in pest management systems
An international short course offered by
The Cooperative Research Centre
for Tropical Pest Management
17-28 November 1997
Brisbane, Australia

This two week course aims to provide participants with an understanding of the theory and value of beneficial organisms in pest management and skills in their integration into an overall management strategy. This course would be of benefit to scientists, extension specialists and others who wish to expand their knowledge of biological control in pest management strategies. Participants will learn:

- to identify and assess the role of naturally occurring beneficial organisms in pest management,
- the processes involved in classical biological control, augmentation of naturally occurring beneficial organisms and inundative release programs,
- to identify situations where beneficial organisms can be used in conjunction with other pest management methods,
- the importance of environmental management for improving the efficacy of beneficial organisms.

The course also aims to encourage participants to apply their learning to insect pest problems of particular importance to them. Participants will therefore be expected to discuss and develop a plan for a project (policy, research or implementation) involving the use of beneficial organisms in which they are, or will be, involved.

The Cooperative Research Centre for Tropical Pest Management is offering a limited number of subsidised places in the course for Australian entomologists. The subsidised fee will be $750 (excluding accommodation and breakfast/dinner). The full fee for the course is $3500 which includes tuition, laboratory work, field trips, course notes, meals, accommodation and transport within Queensland associated with the course. For further information on applying for a subsidised place, or to obtain a course brochure, please contact:

Lynne Grbin
CRC for Tropical Pest Management
Gehrmann Laboratories
The University of Queensland
Queensland 4072
Australia
Telephone: (07) 3365 1874
Fax: (07) 3365 1855
Email: L.Grbin@ctpm.uq.edu.au

XIVth INTERNATIONAL
PLANT PROTECTION CONGRESS
Plant Protection Towards the Third Millenium
Where Chemistry Meets Ecology
Jerusalem, ISRAEL
July 25-30 1999

On behalf of the organising committee you are cordially invited to participate in the XIVth International Plant Protection Congress on July 25-30 1999.

The venue of the meeting is the ICC Jerusalem International Convention Center and the adjacent Holiday Inn Crowne Plaza hotel. The Organising Committee and the entire Plant Protection community of Israel are making every effort to ensure a scientifically interesting meeting and to make your stay with us a pleasant one.

An outstanding Scientific Program has been organised, focussing on important developments in all aspects of Plant Protection.

The Congress will take place in the unique setting of Jerusalem - spiritual center of three great religions and a city of magnificent sites. We feel sure that Jerusalem will provide the appropriate milieu for a stimulating scientific meeting.

The Congress will be dedicated to the memory of Prof. David Rosen, researcher, educator and innovator in the field of Biological Control who passed away recently. He was Chairman of the XIVth IPPC Congress.

For further information and copies of the First Circular:

Congress Secretariat
XIVth International Plant Protection Congress
PO Box 50006
Tel Aviv 61500
ISRAEL
Telephone: +972 3 514 0000
Fax: +972 3 514 0077 or 517 5674
Email: IPPC@Kenes.com

Orthopterists' Society
International Conference
Cairns
26-30 October 1997

Details: *Myrmecia* **32**(4): 53

Informative brochure from **Dr. D.C.F. Rentz,**
CSIRO Division of Entomology,
GPO Box 1700,
Canberra, ACT, 2601,
Australia,
Email: daver@ento.csiro.au.

THE ENTOMOLOGICAL CLUB CONFERENCE
3-5 September 1997
The University of Reading
United Kingdom
Under the auspices of
the Royal Entomological Society
INSECTS AND BIRDS

Details: *Myrmecia* **33**(1): 23
Contact:
Professor H.F. Van Emden
School of Plant Sciences
The University of Reading
Whiteknights
READING, Berkshire
RG6 6AS
United Kingdom
Phone: (0) 118 931 8071
Fax: (0) 118 9750 630
Email: h.f.vanemden@reading.ac.uk

THE OTHER 99%

The Conservation and
Biodiversity of Invertebrates
Australian Museum, Sydney
9-12 December 1997

Details: *Myrmecia* **32**(3): 27
Mailing address and further details:
Australian Museum
Invertebrate Biodiversity Conference
6 College St
Sydney NSW 2000
Fax: 02 9320 6050
Email: invert@amsg.Austmus.oz.au

PLANT PROTECTION
IN A GREEN OASIS:
THE NEXT 50 YEARS.
50th New Zealand
Plant Protection Conference
Lincoln University
Canterbury
New Zealand
18 - 21 August 1997

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Xth INTERNATIONAL CONGRESS OF ACAROLOGY
6-10 July 1998
Canberra, Australia

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Fourth Conference of the International Society of Hymenopterists.
Canberra, AUSTRALIA
6-11 January 1999
Details: *Myrmecia* **32**(1): 28
The Conference address and contact is:
4th Conference of the International Society of Hymenopterists,
c/o CSIRO, Division of Entomology,
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Canberra, ACT 2601
AUSTRALIA
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email: iann@ento.csiro.au.

3rd Brisbane Workshop on Soil Invertebrates
Brisbane
15-17 July 1997
Details: *Myrmecia* **32**(3): 28
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NEW PUBLICATIONS

Proceedings of the 3rd International Workshop on Microbial Control of Soil Dwelling Pests, (TA Jackson & TR Glare eds) NZ $29.00 incl. GST, (USA $20) plus $1.20 postage, packing and handling.

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BOOK REVIEW

An Inordinate Fondness For Beetles
by Arthur V. Evans and Charles L. Bellamy. Published by Henry Holt and Company, 115 West 18th Street, New York. NY 10011. $US40.

Arthur Evans is the Director of the Insect Zoo at the Natural History Museum of Los Angeles County. Charles Bellamy is the Curator of the Coleoptera Department of the Transvaal Museum. These two authors possess a wealth of knowledge and field experience which is admirably brought together in this "must have" book.

The photographs of Lisa Watson portray the spectacular visual and structural diversity of the Coleoptera and rekindle the magic that many entomologists, once as young naturalists, first felt when thumbing through old journals and magazines pictured with beetles from far away places.

"An Inordinate Fondness for Beetles" is structured so that it provides both a "one stop information shop" for those newly introduced to the world of beetles, as well as representing a detailed

reference source for students and biologists generally. It proceeds through a series of chapters that progressively introduce the reader to the concepts of classification and nomenclature, and details evolution and function, behavioural and structural adaptations to environments, and interactions with other organisms. Importantly, it discusses threatening processes that endanger the preservation of beetle diversity and abundance. There is a series of useful appendices that list the major world beetle collections and societies dedicated to the study of beetles.

The authors highlight the adverse impact that shrinking government budgets are having on entomological collections throughout the world. They lay the blame partly with entomologists themselves for failing to vigorously communicate to the public the importance of systematics as fundamental to "elucidating biodiversity and ensuring our ability to organise and verify scientific knowledge".

Putting my review copy down I kept having the nagging feeling that this book should be mandatory reading for politicians who control science funding purse strings and land managers who need reminding that biodiversity is measured by far more than furred and feathered vertebrates.

Geoff WILLIAMS
The Australian Museum
Sydney

NOTICES

SOCIETY OF AUSTRALIAN SYSTEMATIC BIOLOGISTS

A new Society has been formed in Australia to represent and foster systematics and systematists. It encompasses the broad interests and activities of those working in the areas of taxonomy, phylogenetics, biogeography and evolutionary biology, of all groups of organisms and with specific reference to the Australasian Region. The Society operates only by email and has NO MEMBERSHIP FEES. To join please send your Full Name, Postal Address, Taxon group/Interests, E-mail Address, Phone No. and Fax No., to the Society's Secretary, Dr **David Morrison** (davidm@bio.uts.edu.au).

Details about the Society and its inaugural Conference, to be held in Adelaide 29 Sept - 3rd October 1997, can be found on the Society's Home page (http://www.science.uts.edu.au/sasb/)

NSW Threatened Species Conservation Act
WANTED: INSECT NOMINATIONS!

Under the new NSW Threatened Species Conservation Act, insects and other invertebrates are at last officially animals! Eligibility for threatened species status protection has been extended to the whole of the animal kingdom. This represents a great opportunity for insect conservation in NSW.

Endangered or vulnerable insect species, populations and even whole ecological communities can be nominated for listing under the Act. Once listed, the National Parks and Wildlife Service is obliged to undertake measures to ameliorate threats to existence. Nominations are considered, on merit, by a Scientific Committee. The Australian Entomological Society is represented on the Scientific Committee by **Robin Gunning**.

Already, three insect species have been placed on the endangered list. They are *Synemon plana* (Golden Sun Moth), *Paralucia spinosa* (Bathurst Copper Butterfly) and *Dryococelus australis* (Lord Howe Island Phasmid). However, there are many other rare insect and invertebrate species, populations and communities in NSW, which face extinction, due to various threats.

In order to protect our insect biodiversity, the Scientific Committee urgently needs nominations from you, Australia's entomologists. Nomination forms and assistance in preparing nominations can be obtained from:

Robin Gunning
Tamworth Centre for Crop Improvement
RMB 944 Calala Lane
TAMWORTH NSW 2340
Ph (067) 631128
Fax (067) 631222

THE AUSTRALIAN ENTOMOLOGICAL SOCIETY INC.

FORM OF NOMINATION FOR MEMBERSHIP

To be returned to:
Dr D.E. Walter, AES Secretary, c/o Dept. of Entomology
University of Queensland, QLD 4072

We the undersigned

Proposer: . . . . . (print name here) . . . . . (signature)

Seconder: . . . . . (print name here) . . . . . (signature)

being financial members of the Society, propose the following for membership of The Australian Entomological Society Inc.:

Title . . Initials . . Given Name . . . . . Family Name . . . . . .

of (Address): . . . . . .

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Tel: . . . . . Fax: . . . . . .

Email: . . . . . Degrees, etc: . . . . . .

Occupation or Appointment: . . . . . .

Interests, experience, and publications in entomology for publication in the News Bulletin *Myrmecia* (please attach brief resumé):

I accept nomination and undertake if elected to abide by the rules of the Society, and to pay annual subscriptions by the date prescribed.

Signature: . . . . . **Date:** . . . . . .

For **1996**, new student/retired members - $25.00; new full members - $55.00. **Payment with nomination required.** (NB. These rates only apply for new memberships.

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(EXECUTIVE USE ONLY)

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